CLAIMS

I claim:

1. An electric heating device used especially as an auxiliary heating for motor vehicles and comprising a plurality of heating elements, which are combined so as to form a heating block and each of which is adapted to be controlled separately, and a control device for controlling the heating elements, the heating power for each of said heating elements being adapted to be adjusted separately,

   wherein the control device is configured such that, when control of the individual heating elements is effected, an allocation of the respective separately adjustable heating powers to the individual heating elements can be changed at predetermined time intervals.

2. An electric heating device according to claim 1, wherein the change of allocation represents a permutation or a rotation of the allocations of the respective separately adjusted heating powers to the individual heating elements.

3. An electric heating device according to claim 1, wherein the control device controls at least one of the heating elements through switching over between the maximum heating power and zero power.

4. An electric heating device according to claim 1, wherein the control device controls at least one of the heating elements via a substantially continuously adjustable heating power.

5. An electric heating device according to claim 1, wherein the control device controls one of the heating elements via a continuously adjustable heating power and all the other heating elements through switching over between the maximum heating power and zero power.

6. An electric heating device according to claim 4, wherein the control device controls the at least one heating element, whose heating power is continuously adjustable, via a pulse width modulation.

7. An electric heating device according to claim 5, wherein the control device controls the at least one heating element, whose heating power is continuously adjustable, via a pulse width modulation.

8. An electric heating device according to claim 7, wherein the predetermined time intervals represent an integer multiple of a period of the pulse width modulation.

9. An electric heating device according to claim 8, wherein the heating device comprises a total of four separately controllable heating elements and the predetermined time intervals are equal to eight times the period of the pulse width modulation.

10. A method of controlling an electric heating device, used especially as an auxiliary heating for motor vehicles and comprising a plurality of heating elements which are combined so as to form a heating block and each of which is adapted to be controlled separately, the heating power for each of said heating elements being adjusted separately,

wherein the allocation of the respective separately adjusted heating powers to the individual heating elements is changed at predetermined time intervals.

11. A method according to claim 10, wherein the change of allocation represents a permutation or a rotation of the allocations of the respective separately adjusted heating powers to the individual heating elements.

12. A method according to claim 10, wherein one of the heating elements is controlled through switching over between the maximum heating power and zero power.

13. A method according to claim 10, wherein at least one of the heating elements is controlled via a substantially continuously adjustable heating power.

14. A method according to claim 10, wherein one of the heating elements is controlled via a continuously adjustable heating power and that all the other heating elements are controlled through switching over between the maximum heating power and zero power.

15. A method according to claim 13, wherein the at least one heating element whose heating power is continuously adjustable is controlled via a pulse width modulation.

16. A method according to claim 14, wherein the at least one heating element whose heating power is continuously adjustable is controlled via a pulse width modulation.

17. A method according to claim 16, wherein predetermined time intervals represent an integer multiple of a period of a pulse width modulation.

18. A motor vehicle auxiliary electric heating device comprising:

a plurality of separately controllable heating elements which are connected to one another so as to form a heating block; and

a control device for controlling the heating elements, the heating power for each of said heating elements being separately adjustable,

wherein the control device is configured such that, when control of the individual heating elements is effected, an allocation of the respective separately adjustable heating powers to the individual heating elements is changeable at predetermined time intervals.

19. An electric heating device according to claim 18, wherein the change of allocation represents a permutation or a rotation of the allocations of the respective separately adjusted heating powers to the individual heating elements.

20. An electric heating device according to claim 18, wherein the control device is configured to control at least one of the heating elements through switching over between a maximum heating power and zero power.

21. An electric heating device according to claim 18, wherein the control device is configured to control at least one of the heating elements via a substantially continuously adjustable heating power.

22. An electric heating device according to claim 18, wherein the control device is configured to control one of the heating elements via a continuously adjustable

heating power and all the other heating elements through switching over between a maximum heating power and zero power.

23. An electric heating device according to claim 21, wherein the control device is configured to control the at least one heating element, whose heating power is continuously adjustable, via a pulse width modulation.

24. An electric heating device according to claim 22, wherein the control device is configured to control the one heating element, whose heating power is continuously adjustable, via a pulse width modulation.

25. An electric heating device according to claim 24, wherein the predetermined time intervals represent an integer multiple of a period of the pulse width modulation.

26. An electric heating device according to claim 25, wherein the heating device comprises a total of four separately controllable heating elements and the predetermined time intervals are equal to eight times the period of the pulse width modulation.

27. A method of controlling a motor vehicle auxiliary electric heating device, the hating device comprising a plurality of separately controllable heating elements which are interconnected so as to form a heating block, the method comprising:

adjusting the heating power for each of said heating elements separately, and

changing the allocation of the respective separately adjusted heating powers to the individual heating elements at predetermined time intervals.

28. A method according to claim 27, wherein the change of allocation represents a permutation or a rotation of the allocations of the respective separately adjusted heating powers to the individual heating elements.

29. A method according to claim 27, further comprising controlling one of the heating elements through switching over between the maximum heating power and zero power.

30. A method according to claim 27, further comprising controlling at least one of the heating elements via operation of a substantially continuously adjustable heating power.

31. A method according to claim 27, further comprising controlling one of the heating elements via a continuously adjustable heating power and controlling all the other heating elements through switching over between a maximum heating power and zero power.

32. A method according to claim 30, wherein the step of controlling the at least one heating element comprises continuously adjusting the heating power of the at least one heating element via a pulse width modulation.

33. A method according to claim 31, wherein the step of controlling the one heating element comprises continuously adjusting the heating power of the one heating element via a pulse width modulation.

34. A method according to claim 33, wherein the predetermined time intervals represent an integer multiple of a period of the pulse width modulation.